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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/759,942	01/16/2004	David William Boerstler	AUS920030967US1	8210

7590 01/26/2005  
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EXAMINER

LUU, AN T

ART UNIT PAPER NUMBER

2816

DATE MAILED: 01/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/759,942

Applicant(s)

BOERSTLER ET AL.

Examiner

An T. Luu

Art Unit

2816

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 16 January 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 7 and 9 is/are allowed.
- 6) ☒ Claim(s) 1-6 and 8 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by the Nakao et al reference (U.S. Patent 5,781,048).

Nakao et al discloses in figure 5 an apparatus comprising a voltage controlled Phased Locked Loop (PLL), wherein the PLL is at least configured to have Low Pass Filter (LPF) 23 and a Voltage Controlled Oscillator 24 coupled at a first node(N23A; N23B); and a charge leakage correction circuit (I31-34; N31-32; P31-32; R31-32 and 31) at least coupled to the first node as required by claim 1.

As to claim 2, figure 5 shows a charge pump (I31-34; N31-32; P31-32), wherein the charge pump is at least configured add charge to the LPF and wherein the charge pump least configured to subtract voltage from the LPF (i.e., turning ON/OFF transistors N31-32; P31-32) and a differentiator 31, wherein the differentiator is at least coupled the charge pump and wherein the differentiator is at least configured to measure the rate of change of the across the LPF (i.e., comparing to the reference 32R).

As to claims 3 and 5, the scopes of claims are similar to that of claim 2. Therefore, they are rejected for the same reason set forth above. It is inherent that the function of a charge pump is for adding or subtracting voltage.

Art Unit: 2816

As to claim 4, figure 5 shows the charge pump comprising plurality of switches (N31-32; P31-32) at least configured to be coupled to the first node; a positive current source (I31-32) coupled to at least one first switch of the plurality of switches; a negative current source (I33-34) coupled to at least one second switch of the plurality of switches.

As to claim 6, it is rejected for reciting a method derived from the apparatus of claim 2, which is rejected as noted above. It is noted that col. 7, lines 6-61, of Nakao et al teaches removing charge if rate of change at LPF is positive (i.e., higher than reference 32R) and removing charge if rate of change at LPF is negative (i.e., lower than reference 32R).

### ***Claim Rejections - 35 USC § 103***

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claim 8 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nakao et al reference (U.S. Patent 5,781,048) in view of the Saleh et al reference (U.S. 5,663,890).

Nakao et al discloses all the claimed inventions of claim 8 (See above paragraph) except for teaching a computer programming code to execute method/step performed by the apparatus described in claims 1-6 that are rejected as noted above.

Saleh et al discloses in figure 2 an apparatus comprising a circuit 10 to be execute by and a computer program code 15 as required by the claim.

Art Unit: 2816

In an era of automation, it is well known that all steps to control or to operate an apparatus can be performed by a computer program code. It would have been obvious to one skilled in the art at the time the invention was made to automatize the teachings of Nakao et al by utilizing a computer program code as suggested by Saleh et al.

A skilled artisan in the field would be motivated to automatize Nakao's apparatus for the benefit of remotely controlling and/or studying the effects of parametric variations, efficiently and economically.

***Allowable Subject Matter***

5. Claims 7 and 9 are allowed.

6. The following is a statement of reasons for the indication of allowable subject matter: the prior art of record fails to disclose an apparatus and method thereof comprising elements/steps being constructed as required by claims 7 and 9. Specifically, none of the prior art teaches or fairly suggests, among other things, the limitation "*measuring the voltage across the LPF at lock to obtain a first measured voltage; measuring the voltage across the LPF periodically after lock to obtain a second measured voltage*".

***Conclusion***

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.


Art Unit: 2816

Any inquiry concerning this communication or earlier communications from the examiner should be directed to An T. Luu whose telephone number is 571-272-1746. The examiner can normally be reached on 7:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy P. Callahan can be reached on 571-272-1740. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

An T. Luu

1-21-05 



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